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# SUPPLEMENTAL SERVICE INSTRUCTIONS

# VCS2000

## UNIVERSAL HOOD - VENTLESS COOK SYSTEM

**IMPORTANT:** WELLS MANUFACTURING PROPRIETARY INFORMATION. DISSEMINATION OF THIS INFORMATION TO ANYONE OTHER THAN WELLS AUTHORIZED SERVICE AGENTS IS STRICTLY PROHIBITED. TECHNICAL CONTENT OF THIS MANUAL IS DESIGNED FOR USE BY QUALIFIED PROFESSIONAL TECHNICIANS ONLY.

PRINTED IN UNITED STATES OF AMERICA

**WARNING: Risk of personal injury**

Installation procedures must be performed by a qualified technician with full knowledge of all applicable electrical and plumbing codes. Failure can result in personal injury and property damage.

**WARNING: Electric Shock hazard**

All servicing requiring access to non-insulated electrical components must be performed by a qualified technician. DO NOT open any access panel which requires the use of tools. Failure to follow this warning can result in severe electrical shock.

**CAUTION: Risk of Damage**

DO NOT connect or energize this appliance until all installation instructions are read and followed. Damage to the appliance will result if these instructions are not followed.

This appliance is intended for use in commercial establishments only.

This appliance is intended to prepare food for human consumption. No other use is recommended or authorized by the manufacturer or its agents.

Operators of this appliance must be familiar with the appliance use, limitations and associated restrictions. Operating instructions must be read and understood by all persons using or installing this appliance.

Cleanliness of this appliance is essential to good sanitation. Read and follow all included cleaning instructions and schedules to ensure the safety of the food product.

Disconnect this appliance from electrical power before performing any maintenance or servicing.

DO NOT splash or pour water on, in or over any controls, control panel or wiring.

The technical content of this manual, including any wiring diagrams, schematics, parts breakdown illustrations and/or adjustment procedures, is intended for use by qualified technical personnel.

Any procedure which requires the use of tools must be performed by a qualified technician.

This appliance is made in the USA. Unless otherwise noted, this appliance has American sizes on all hardware.

GENERAL DIMENSIONS:

| | |
|---|---|
| Wide | 30-3/8” |
| Deep | 35-1/16” |
| High | 77-3/16” |

**IMPORTANT INSTALLATION NOTE:**

6” clearance is required from back and sides of the appliance to any combustible or non-combustible surface.

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# INTRODUCTION

This manual contains information needed to properly service and repair the hood section of VCS200 Ventless Cook System equipment.

This manual applies to the following Wells Manufacturing models:

| | |
|---|---|
| WV-2HG | WV-2HGRW |
| WV-2HSG | WV-2HSGRW |
| WV-4HC | WV-4HCRW |
| WV-4HF | WV-4HFRW |
| WV-4HS | WV-4HSRW |
| WVF-886 | WVF-886RW |
| WV-FG | WV-FGRW |
| WVG-136 | WVG-136RW |
| WVOC-2HFG | |
| WVOC-2HSG | |
| WVOC-4HC | |
| WVOC-4HF | |
| WVOC-4HS | |
| WVOC-G136 | |

For installation, operation and maintenance instructions, refer to the Operation Manual for the specific model.

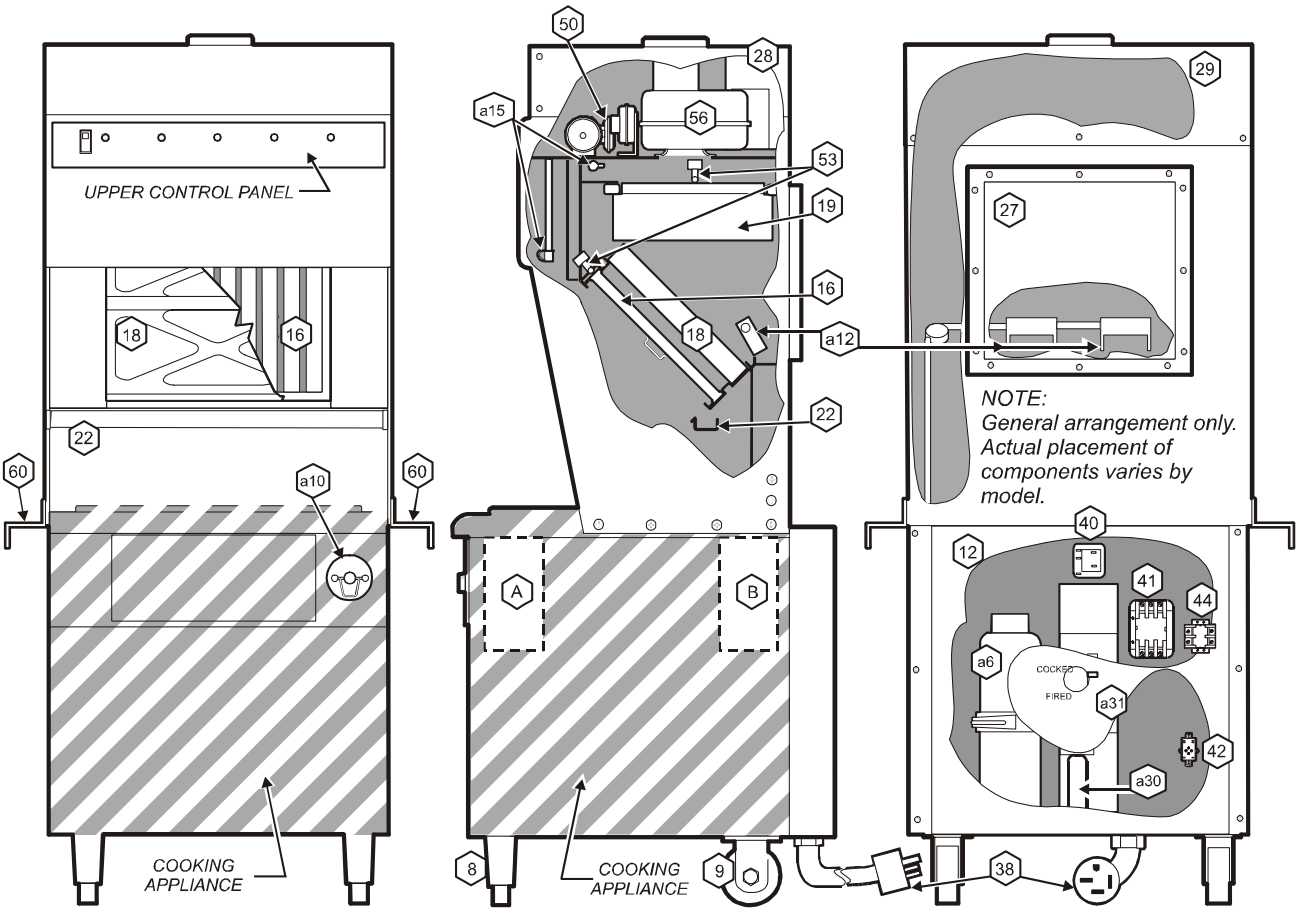
# ELECTRICAL SPEC IFICATIONS

| MODEL | ROLL WARMER | VOLTS | WATTS | AMPS 3ø | | | AMPS 1ø | POWER SUPPLY CORD |
|---|---|---|---|---|---|---|---|---|
| | | | | L1 | L2 | L3 | | |
| **WV-2HG** | NO | 208 | 8,000 | 16 | 32 | 23 | 39 | NEMA 15-60P |
| | | 240 | 9,900 | 18 | 35 | 24 | 41 | |
| **WV-2HGRW** | YES | 208 | 8,675 | 19 | 32 | 26 | 42 | |
| | | 240 | 10,800 | 21 | 35 | 27 | 45 | |
| **WV-2HSG** | NO | 208 | 8,900 | 21 | 35 | 24 | 43 | |
| | | 240 | 11,100 | 23 | 38 | 24 | 46 | |
| **WV-2HSGRW** | YES | 208 | 9,575 | 23 | 35 | 26 | 46 | |
| | | 240 | 12,000 | 26 | 38 | 27 | 50 | |
| **WV-4HC** | NO | 208 | 7,800 | 19 | 18 | 33 | 36 | NEMA 15-60P |
| | | 240 | 10,300 | 22 | 21 | 37 | 43 | |
| **WV-4HCRW** | YES | 208 | 8,500 | 23 | 22 | 36 | 40 | |
| | | 240 | 11,300 | 26 | 21 | 41 | 47 | |
| **WV-4HF** | NO | 208 | 6,300 | 16 | 15 | 26 | 30 | |
| | | 240 | 8,300 | 18 | 17 | 30 | 35 | |
| **WV-4HFRW** | YES | 208 | 7,000 | 19 | 15 | 30 | 34 | |
| | | 240 | 9,200 | 22 | 17 | 34 | 38 | |
| **WV-4HS** | NO | 208 | 8,100 | 20 | 19 | 34 | 39 | |
| | | 240 | 10,700 | 23 | 22 | 39 | 45 | |
| **WV-4HSRW** | YES | 208 | 8,800 | 23 | 19 | 37 | 42 | |
| | | 240 | 11,600 | 27 | 22 | 43 | 48 | |
| **WVF-886** | NO | 208 | 12,000 | 33 | 32 | 33 | 58 | NEMA 15-60P |
| | | 240 | 12,000 | 29 | 28 | 29 | 50 | |
| **WVF-886RW** | YES | 208 | 12,720 | 37 | 33 | 37 | 58 | |
| | | 240 | 12,720 | 29 | 28 | 29 | 50 | |
| **WV-FG** | NO | 208 | 10,750 | 30 | 43 | 24 | 52 | NEMA 15-60P |
| | | 240 | 11,650 | 26 | 40 | 24 | 49 | |
| **WV-FGRW** | YES | 208 | 11,425 | 32 | 43 | 26 | 55 | |
| | | 240 | 12,550 | 28 | 40 | 27 | 52 | |

## ELECTRICAL SPEC IFICATIONS (continued)

| MODEL | ROLL WARMER | VOLTS | WATTS | AMPS 3ø | | | AMPS 1ø | POWER SUPPLY CORD |
|---|---|---|---|---|---|---|---|---|
| | | | | L1 | L2 | L3 | | |
| **WVG-136** | NO | 208 | 7,300 | 17 | 29 | 17 | 35 | NEMA 15-60P |
| | | 240 | 9,500 | 20 | 33 | 20 | 40 | |
| **WVG-136RW** | YES | 208 | 7,900 | 20 | 28 | 20 | 38 | |
| | | 240 | 10,400 | 24 | 33 | 24 | 43 | |
| **WVOC-2HFG** | NO | 208 | 12800 | 37 | 36 | 33 | 62 | NEMA 15-60P |
| | | 240 | 15500 | 39 | 37 | 36 | 65 | |
| **WVOC-2HSG** | NO | 208 | 13700 | 41 | 38 | 35 | 66 | |
| | | 240 | 16700 | 44 | 39 | 38 | 70 | |
| **WVOC-4HC** | NO | 208 | 13000 | 39 | 37 | 32 | 63 | NEMA 15-60P |
| | | 240 | 16100 | 40 | 39 | 37 | 67 | |
| **WVOC-4HF** | NO | 208 | 11500 | 35 | 34 | 26 | 55 | |
| | | 240 | 14100 | 36 | 35 | 30 | 59 | |
| **WVOC-4HS** | NO | 208 | 13300 | 39 | 38 | 34 | 64 | |
| | | 240 | 16500 | 41 | 40 | 39 | 69 | |
| **WVOC-G136** | NO | 208 | 12,200 | 37 | 28 | 37 | 59 | NEMA 15-60P |
| | | 240 | 15,000 | 38 | 33 | 38 | 63 | |

# FEATURES & OPERATING CONTROLS




| | |
|---|---|
| A. POWER CONNECTION BOX | Factory-wired for griddle connection only. |
| B. COOKING APPLIANCE FUSES | Fuse protection for fryer circuits. Use 10 Amp Type G fuse only. |
| 8. ADJUSTABLE (FRONT) LEG | Allows the unit to be leveled. |
| 9. RIGID (REAR) CASTER | Allows the unit to be easily positioned by lifting the front of the unit slightly. For full mobility, order front caster kit# 22650. |
| 12. LOWER REAR ACCESS | |

**IMPORTANT:** If a remote pull station is installed, both rear casters (9) must be replaced with legs (rear leg kit# 22649) to deter moving the unit. MOVING AN APPLIANCE WITH A REMOTE PULL STATION WILL DISCHARGE THE FIRE SUPPRESSION SYSTEM.

| | |
|---|---|
| 16. GREASE BAFFLE | |
| 18. PRE-FILTER ASSEMBLY | Allows access to Ansul® fire suppression automan components<br>Access to appliance power contactor (41).<br>Access by QUALIFIED ELECTRICIAN OR LICENSED ANSUL® SERVICE DISTRIBUTOR ONLY. |
| 19. HEPA/CHARCOAL FILTER PACK | Extracts and drains most grease and moisture from the air flow. |

## FEATURES & OPERATING CONTROLS (continued)

| | |
|---|---|
| 22. GREASE CUP | Collects grease/moisture drained from grease baffle (16). |
| 27. UPPER REAR ACCESS PANEL | Allows rear access to pre-installed fusible links (a12). |
| 28. VENTILATOR EXHAUST DUCT | Exit point for ventilator air flow on left rear top of unit. |
| 29. TOP ACCESS PANEL | Allows access to controls, wiring diagram and ventilator fan (56). |
| 38. POWER CORD AND PLUG | 3ø with ground 60 Amp, NEMA 15-60P plug. |
| 40. ROLL WARMER POWER CONTACTOR | Energizes roll warmer section (when installed). |
| 41. APPLIANCE POWER CONTACTOR | Energizes cooking appliance only while ventilator section is sensed as operational (all filters must be in position). |
| 42. BUILDING FIRE ALARM RELAY SYSTEM | Energized by Ansul® system discharge; for connection to building fire alarm system. |
| 44. EXTERNAL INTERLOCK CONNECTION | For use with customer supplied hood power safety shut-down or customer supplied facilities fire panel. See wiring schematic. |
| 50. VACUUM SWITCHES (4) | Detects operation of ventilator and filters. |
| 53. INTERLOCK SWITCHES | Detect presence of filter pack (18) and grease baffle (16). Both filter pack switch and grease baffle switch must be made for unit to operate. |
| 56. VENTILATOR FAN | Provides air movement for ventilation and provides primary vacuum for vacuum detection system. |
| 60. SPACER | Maintains required 6” clearance to adjacent surfaces. |

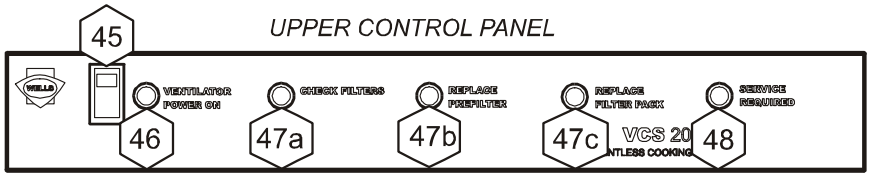
**NOTE:** Fire suppression system and all associated components must be serviced only by an authorized Ansul® Distributor. All setup, charging, repair and/or adjustment of the fire suppression system must be performed by an **Authorized Ansul® Distributor ONLY**.
Operating this appliance without the Ansul® system functioning and certified will void the warranty. Operator assumes all liability for fire-related injury and damage in the event any safety feature is defeated and the unit is operated without a fully functional fire suppression system.

| | |
|---|---|
| a6. FIRE SUPPRESSION AGENT | Pressurized container for fire suppression media. Ansul Low pH™ TANK (1.5 gal.) is the only agent authorized for use in this system. |
| a10. MANUAL PULL STATION | Provides a means of manual activation of the fire suppression system. PULL ONLY IN CASE OF FIRE! |
| a12. UPPER FUSIBLE LINK (PRE-INSTALLED) | Will melt, initiating a discharge of fire suppression system in the event of temperature over 165ºF (fryer) or 212ºF (griddle). |
| a15. FIRE SUPPRESSION DISCHARGE NOZZLES | Controls dispersion of fire suppression media in the event of a discharge. Ansul® p/n 1W (plenum) and 290 (cooking appliance). |
| a30. SUPPRESSION AGENT PROPELLANT BOTTLE | Used to propel suppression agent when system is activated. Must be Ansul® propellant for R-102™ system. |
| a31. FIRE SUPPRESSION CONTROL (AUTOMAN™) STATUS INDICATOR (*COCKED - FIRED*) | Controls discharge of fire suppression media. Displays status of fire suppression system. If *FIRED*, a buzzer will sound continuously. |

## HOOD OPERATION

**WARNING: FIRE AND HEALTH HAZARDS**
DO NOT bypass or attempt to bypass the filter placement interlocks. Operating the appliance without filters properly in place will compromise the fire protection and air filtration capabilities of this unit. Serious personal injury and/or substantial property damage may result.

**NOTICE:** Operating without all filters properly in place, and/or operating with filter placement interlocks defeated will void the manufacturer's warranty.




45. POWER SWITCH — Energizes the ventilator section. When all three filters are sensed as being in their proper position, and sufficient airflow is proven, the cooking appliance contactor (41) is energized.

46. INDICATOR LIGHT (GREEN) ***VENTILATOR POWER ON*** — When lit, indicates that electrical power is available, and that the power switch (45) is turned *ON.*

47a. INDICATOR LIGHT (AMBER) ***CHECK FILTERS*** — When lit, indicates that one (or more) of the three filters is not in its proper position, or that an interlock switch (53) is out of adjustment.

47b. INDICATOR LIGHT (AMBER) ***REPLACE PREFILTER*** — When lit, indicates that the pre-filter is approaching the end of its service life.
**ALWAYS HAVE A SPARE PRE-FILTER ON HAND FOR REPLACEMENT.**

47c. INDICATOR LIGHT (AMBER) ***REPLACE FILTER PACK*** — When lit, indicates that the filter pack is approaching the end of its service life.
**REPLACE FILTER PACK PROMPTLY!**

48. INDICATOR LIGHT (RED) ***SERVICE REQUIRED*** — **Note:** *Power to the cooking appliance will be de-energized whenever this RED "**SERVICE REQUIRED**" indicator light is lit.* When lit, the air flow is insufficient to meet appliance vapor capture levels requirements. Indicates that either the pre-filter or the filter pack is individually clogged (the individual indicator light may be lit), or that the the airflow drop across both filters is critical. As a cost saving measure, **always change a dirty pre-filter first** (when lights 47b & 47c are *not lit*, and red light 48 is *on*).

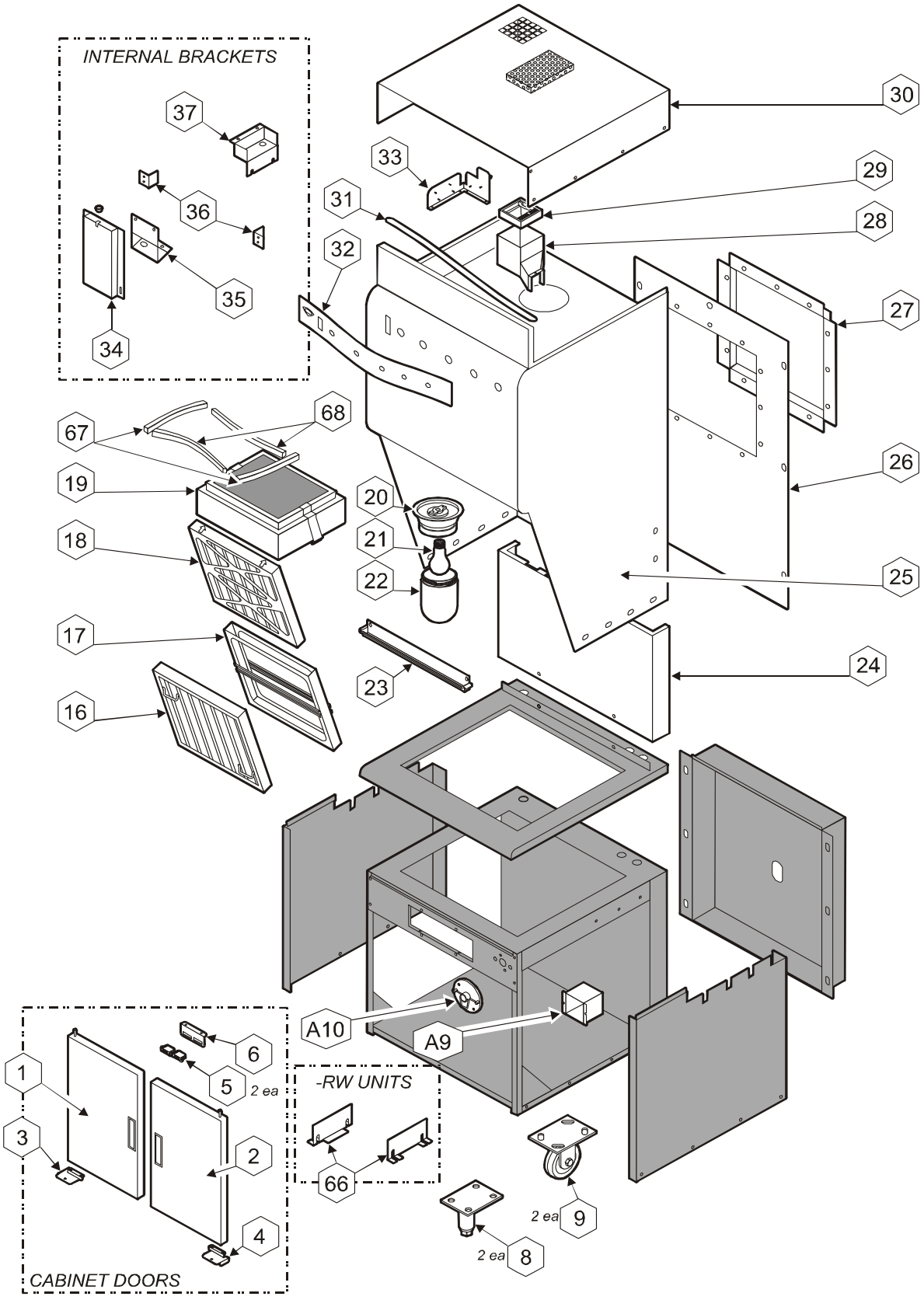
**OPERATIONAL NOTES:** *REPLACE PREFILTER* and *REPLACE FILTER PACK* indicator lights provide a timely warning that a system shut-down is imminent. The actual time between the indicator light coming on and the loss of cooking appliance power will depend upon the cooking conditions. Anytime a dirty PRE-FILTER is replaced, the system airflow will increase. If the condition of the FILTER PACK is marginal, the *REPLACE FILTER PACK* light could then come on. If this happens, a fresh FILTER PACK must be installed within a reasonably short time. Loss of airflow through the old filter pack will soon cause a system shut-down when the airflow falls below minimum vapor capture levels. **KEEP A SPARE FILTER PACK ON HAND**.
**IMPORTANT:** If you decide to "get the most" out of the old filter pack, and continue to use it until a system shut-down happens, it is advisable to have a fresh filter pack readily at hand, and have someone available who is capable of replacing it. Otherwise, you may experience an extended down time, with consequent associated loss of business.
**The manufacturer assumes no liability for loss of business due to a system shutdown caused by a dirty pre-filter and/or filter pack (i.e. red *SERVICE REQUIRED* light is on), *when the user fails to have the proper replacement pre-filter and/or filter pack on hand*.**

IMPORTANT: NEVER wash the PREFILTER or FILTER PACK.
This will shut down the cooking appliance. (Red "SERVICE REQUIRED" will turn *ON*).

## TROUBLESHOOTING SUGGESTIONS

| SYMPTOM | POSSIBLE CAUSE | SUGGESTED REMEDY |
|---|---|---|
| Entire unit inoperative - no lights glow and no buzzer sounds | Unit unplugged. | Plug power cord into receptacle |
| | Circuit breaker off or tripped | Reset circuit breaker |
| | Damaged power cord | Replace power cord |
| | Damaged power switch | Check switch. Replace as req'd. |
| Cooking appliance inoperative "POWER" light on hood *ON*. Vent fan working ok with no service lights on. | Contactor not energized | Open coil. Replace contactor |
| | | Damaged wiring. Repair as req'd. |
| | Vacuum line to switch #4 restricted | Check for restriction in vacuum line to switch. |
| | Vacuum switch # 4 open or defective | Check vacuum switch # 4. Replace as req'd. |
| | Vacuum tap on blower plugged | Clean vacuum tap |
| Vent fan starts Ok but amber "CHECK FILTERS" light stays *ON* | One or more filter interlock switches are open (grease baffle or filter pack) | Missing or un-seated filter assy. Reseat filter or adjust interlock switch. |
| | Vacuum switch # 1 open or defective | Be sure pre-filter is hooked in position. Check for disconnected vacuum line on vacuum switch or at pick-up port. |
| Hood is operating but "REPLACE PREFILTER" light *ON*. | Prefilter is at end of service life | Replace prefilter |
| | Vacuum Switch # 1 defective | Replace vacuum switch # 1 |
| "REPLACE PREFILTER" light turns on some of the time. | Pre-filter frame not hooked in position at top | Hook metal pre-filterframe at top to prevent air blowing around filter |
| | Prefilter is nearing end of service life | Replace prefilter. |
| Vent fan not operating and buzzer is sounding. | Appliance newly installed and Ansul® system not yet charged. | Check status of Ansul® system at rear of unit, if fired, **call Ansul® Service Distributor** for set-up. |
| | Ansul® system has been set off by overtemp condition or manual pull station has been activated. | Check status of Ansul® system at rear of unit, if fired, **call Ansul® Service Distributor** for replacement of fire suppressant agent and propellant. If fuse link has been activated, it must be replaced prior to re-cocking Ansul® system. |
| Vent fan not operating.<br>Buzzer silent.<br>Green "POWER" light *ON.*<br>Amber "CHECK FILTER" light and red "SERVICE REQUIRED" light *ON*. | Grease baffle not installed | Install grease baffle. |
| | Grease baffle interlock switch misadjusted or bad | Check interlock switch, adjust or replace |

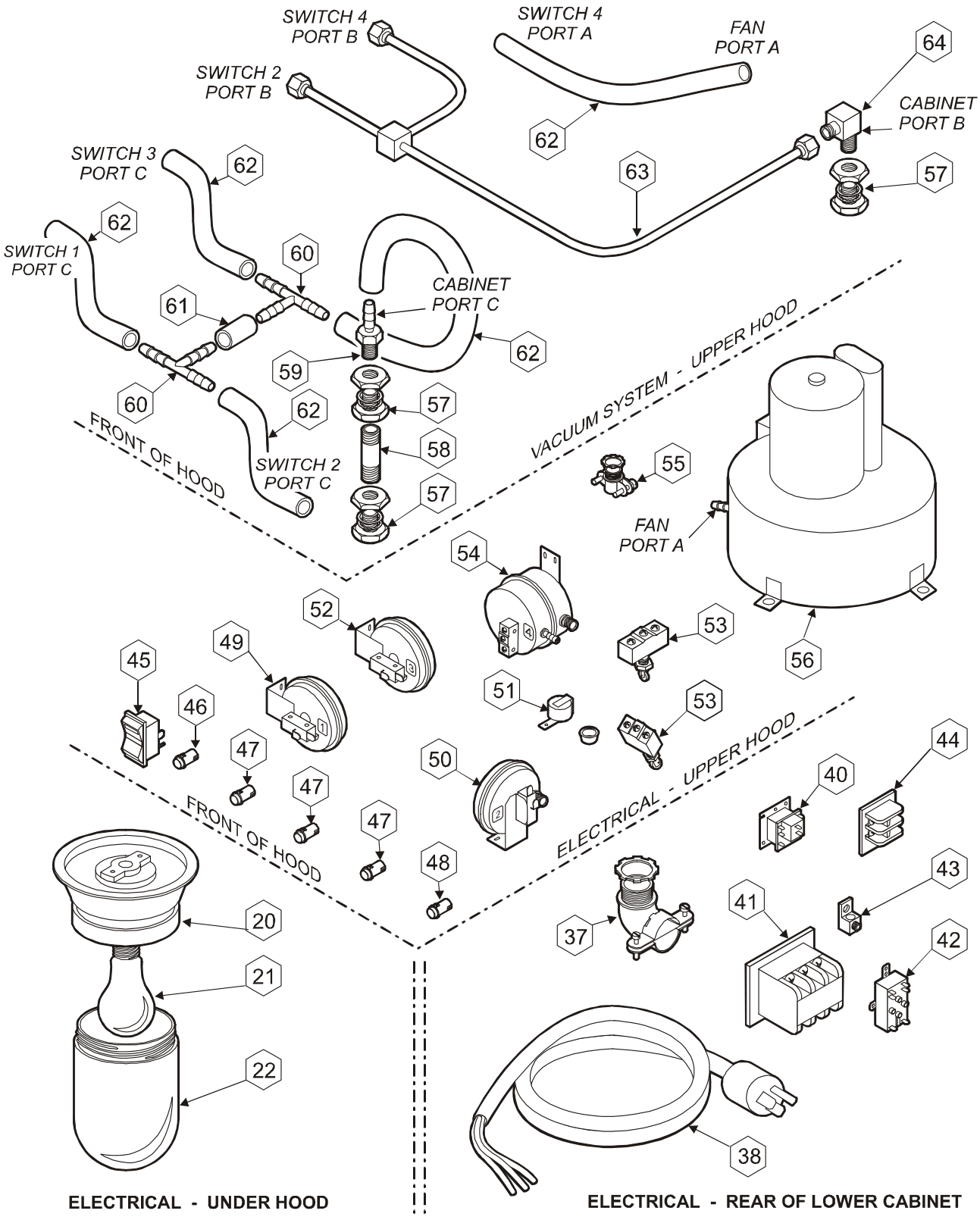
# EXPLODED VIEW - CABINET COMPONENTS



# PARTS LIST - CABINET COMPONENTS

| ITEM | DESCRIPTION | | WELLS PART NO. | VENDOR PART NO. (provided for reference only) |
|---|---|---|---|---|
| 1 | ASSEMBLY, DOOR LEFT (NOT FOR –RW UNITS) | | 502642 | |
| 2 | ASSEMBLY, DOOR RIGHT (NOT FOR –RW UNITS) | | 502646 | |
| 3 | DOOR HINGE, LEFT | | | |
| 4 | DOOR HINGE, RIGHT | | | |
| 5 | MAGNET, DOOR CATCH | | 66502 | |
| 6 | BRACKET, DOOR MAGNET | | | |
| 8 | ASSEMBLY, ADJUSTABLE LEG | | 22649 (REAR LEG OPT) | |
| 9 | CASTER, REAR | | 20804<br>(2 SWIVEL, 2 FIXED) | |
| 16 | BAFFLE, GREASE FILTER (TYPE 3) | | 22684 | |
| 17 | CAGE, PRE-FILTER | | 22683 | |
| 18 | PREFILTER | | 22618 | |
| 19 | ASSEMBLY, FILTER PACK | | 22619 | |
| 20 | HOUSING, LIGHT SOCKET | | 505098 | |
| 21 | BULB, APPLIANCE 100W | | 505100 | |
| 22 | GLASS GLOBE, LIGHT BULB COVER | | 505099 | |
| 23 | GREASE CUP | | 504405 | |
| 24 | PANEL, APPLIANCE REAR | | | |
| 25 | ASSEMBLY, HOOD CABINET | | | |
| 26 | PANEL, BACK | | | |
| 27 | PANEL, REAR ACCESS | | | |
| 28 | EXHAUST DUCT | | | |
| 29 | ASSEMBLY, BLOWER FIRE DAMPER (286ºF) | | | KFD350A |
| 30 | PANEL, TOP COVER | | | |
| 31 | SEALANT, 1/4” x 30” | | | |
| 32 | LABEL, CONTROL PANEL | | 502782 | |
| 33 | BRACKET, VACUUM SWITCHES | | | |
| 34 | COVER, INTERLOCK | | | |
| 35 | ASSEMBLY, BAFFLE INTERLOCK BRACKET | | | |
| 36 | GUIDE, FILTER PACK | | | |
| 37 | BRACKET, FILTER PACK INTERLOCK | | | |
| 66 | GUIDE, -RW DRAWERS (-RW UNITS ONLY) | | | |
| 67 | GASKET, SILICONE 15-1/4” | Must be applied with UL recognized silicone adhesive | 502772 | |
| 68 | GASKET, SILICONE 18-1/2” | | 502773 | |
| A9 | CONDUIT BOX, MANUAL PULL STATION | | | |
| A10 | ANSUL® MANUAL PULL STATION | | 501389 | 4835 |

# EXPLODED VIEW - ELECTRICAL & VACUUM COMPONENTS

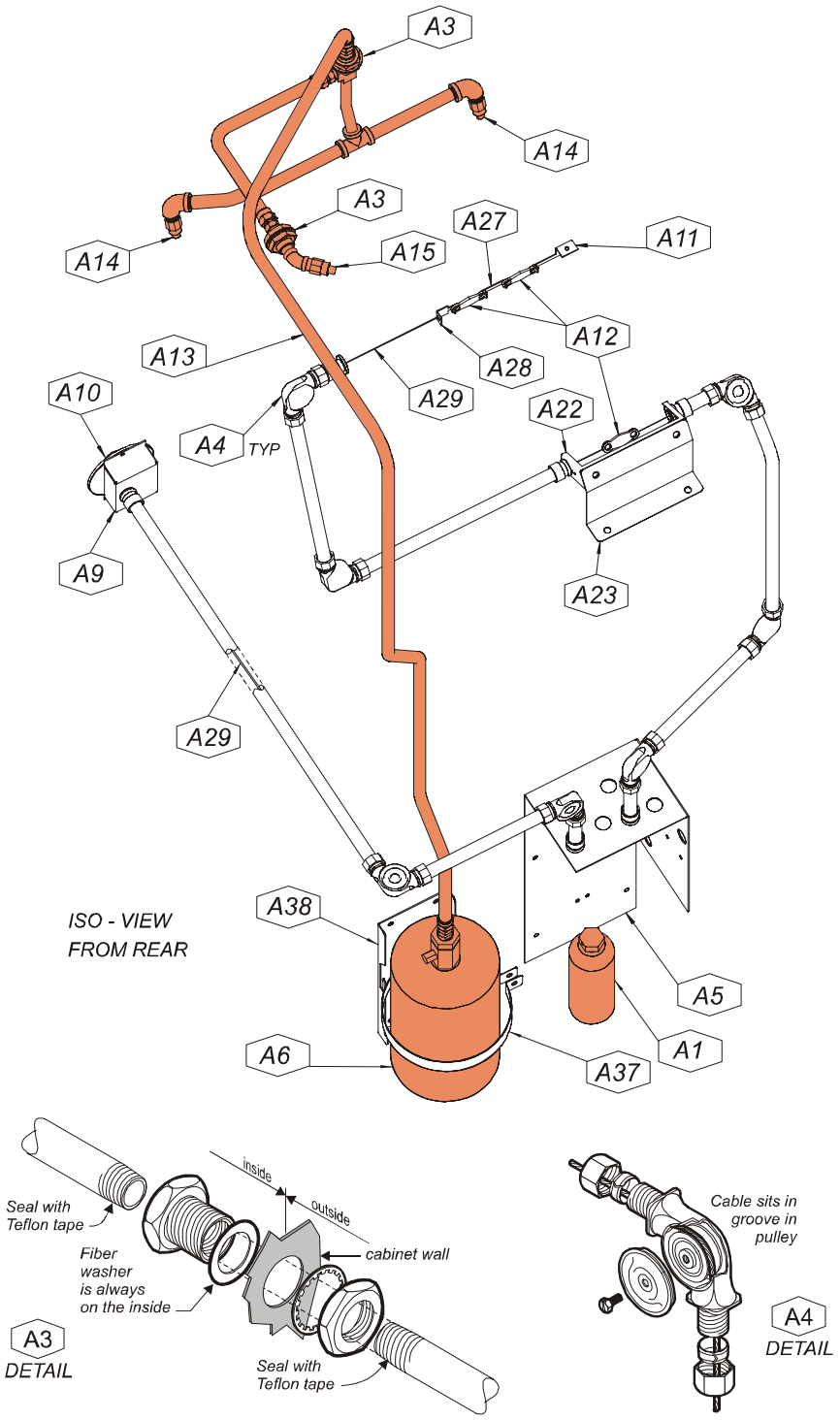


# PARTS LIST - ELECTRICAL & VACUUM COMPONENTS

| ITEM | DESCRIPTION | WELLS PART NO. | VENDOR PART NO. (provided for reference only) |
|---|---|---|---|
| 20 | HOUSING, LIGHT SOCKET | 505098 | |
| 21 | BULB, APPLIANCE 100W | 505100 | |
| 22 | GLASS GLOBE, LIGHT BULB COVER | 505099 | |
| 37 | STRAIN RELIEF 1-1/4", APPLETON | 504420 | |
| 38 | ASSEMBLY, POWER CORD (INCLUDES STRAIN RELIEF) | 22682 | NEMA-15-60P |
| 40 | RELAY, 208/240V (-RW ONLY), STANCOR | | |
| 41 | CONTACTOR, 50a 3ø 208/240V, FASCO | 502789 | |
| 42 | RELAY, BUILDING FIRE ALARM, STANCOR | 64514 | |
| 43 | LUG, GROUND SOLDERLESS 6-14 GA. | | |
| 44 | TERMINAL BLOCK, 2 POLE | 53068 | |
| 45 | SWITCH, POWER | 8528-40 | |
| 46 | LIGHT, INDICATOR, GREEN 240V | 55697 | |
| 47 | LIGHT, INDICATOR AMBER 240V | 50516 | |
| 48 | LIGHT, INDICATOR RED 240V | 51157 | |
| 49 | SWITCH, VACUUM #1 | 502590 | |
| 50 | SWITCH, VACUUM #2 | 502591 | |
| 51 | BUZZER, 240V | 64834 | |
| 52 | SWITCH, VACUUM #3 | 502592 | |
| 53 | SWITCH, FILTER INTERLOCK | 500407 | |
| 54 | SWITCH, VACUUM #4 | 502593 | |
| 55 | FITTING, CONDUIT 1/2" STRAIGHT | 57748 | |
| 56 | BLOWER ASSEMBLY, 240V | 502584 | |
| 57 | ADAPTER, QUIL-SEAL 3/8" | | 77285 |
| 58 | NIPPLE, 1/4NPT x 2" GALV | | |
| 59 | ADAPTER, 3/8TUBE x 1/4MPT | | |
| 60 | TEE, NYLON | | |
| 61 | TUBING, .18" x 1.0" CLEAR VINYL | | |
| 62 | TUBING, .18" x 5.5" CLEAR VINYL | | |
| 63 | ASSY, VACUUM TUBING MANIFOLD | 502588 | |
| 64 | ELBOW, 90º 1/4COMP x 1/4MPT | | |

**EXAMPLE OF AN ANSUL® INSTALLATION**

**NOTE:** Number and layout of tubing, nozzles and fusible links in various VCS2000 appliances may vary.




FOR USE BY AUTHORIZED ANSUL® SERVICE PERSONNEL ONLY

Refer to Ansul® part no. 418087-05 *R-102 Restaurant Fire Suppression System Design, Installation, Recharge and Maintenance Manual*.

# PARTS LIST - FIRE SUPPRESSION COMPONENTS

| ITEM | DESCRIPTION | WELLS PART NO. | VENDOR PART NO. (provided for reference only) |
|---|---|---|---|
| A1 | CARTRIDGE, LT-20-R ANSUL | 67099 | 7032 |
| A3 | ADAPTER, QUICK-SEAL 3/8” | | 77284 |
| A4 | PULLEY, ELBOW | | 423250 |
| A5 | MOUNTING BRACKET, ANSUL RELEASE MECHANISM, R-102 | | 79493 |
| A6 | TANK, ANSULEX 1.5 GAL. | | 429864 |
| A9 | BOX, MANUAL PULL STATION | | |
| A10 | ASSEMBLY, REMOTE PULL STATION | 501389 | 4835 |
| A11 | HOLDER, LINK TERMINAL | | |
| A12 | LINK, FUSIBLE 212ºF, TYPE B | 503037 | 415740 |
| | LINK, FUSIBLE 165ºF, TYPE B | 502583 | 415739 |
| A13 | FLEX HOSE, 82-3/4” | | 10-S0046-80.75 |
| A14 | NOZZLE 290 (COOKING APPLIANCE) | | 419342 |
| A15 | NOZZLE 1W (PLENUM) | | 419336 |
| A22 | FUSE LINK HOLDER (SERIES DETECTOR) | | 417369 |
| A23 | HOLDER, LINK BRACKET | | |
| A27 | HOLDER, LINK CENTER | | |
| A28 | HOLDER, LINK CABLE | 67399 | |
| A29 | CABLE, WIRE ROPE | | 79653 |
| A37 | STRAP, ANSULEX TANK | | |
| A38 | BRACKET, ANSULEX TANK MOUNTING | | |
| NOT SHOWN | | | |
| | MICRO SWITCH (RELEASE MECHANISM) | 67273 | 423878 |
| | TERMINAL BLOCK, REMOTE ALARM | 53068 | |
| | ANSULEX® EXTINGUISHING AGENT 1.5 GAL | 67469 | 79694 |
| | ADAPTER, QUICK-SEAL 1/4” | | 78196 |
| | STOP SLEEVE | | 26317 |
| | OVAL SLEEVE | | 4596 |

# MSDS - ANSULEX™ Low pH FIRE SUPPRESSION MEDIA

**ANSUL®** ANSUL INCORPORATED
MARINETTE, WI 54143-2542

**MATERIAL SAFETY DATA SHEET**

**ANSULEX Low pH**
QUICK IDENTIFIER (In Plant Common Name)

| | | | |
|---|---|---|---|
| Manufacturer's Name: | **ANSUL INCORPORATED** | Emergency Telephone No.: | **CHEMTREC (800) 424-9300 or (703) 527-3887** |
| Address: | One Stanton Street, Marinette, WI 54143-2542 | Other Information Calls: | (715) 735-7411 |
| Prepared By: | Safety and Health Department | Date Prepared: | February 1, 1999 |

## SECTION 1 - IDENTITY

| | | | |
|---|---|---|---|
| Common Name (Used on Label): (Trade Name and Synonyms) | ANSULEX Low pH Liquid Fire Suppressant | CAS No.: | N/A |
| Chemical Name: | N/A This is a Mixture | Chemical Family: | Mixture |
| Formula: | N/A | | |

## SECTION 2 - INGREDIENTS

**PART A - HAZARDOUS INGREDIENTS**

| Principal Hazardous Component(s) (chemical and common name(s)): | Wt.% | CAS No. | ACGIH TLV | Acute Toxicity Data |
|---|---|---|---|---|
| None | N/A | N/A | N/A | N/A |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**PART B - OTHER INGREDIENTS**

| Other Component(s) (chemical and common name(s)): | Wt.% | CAS No. | ACGIH TLV | Acute Toxicity Data |
|---|---|---|---|---|
| Proprietary Mixture of Organic and Inorganic Salts | 48.0 - 50.0 | N/A | N/E | NDA |
| Phosphoric Acid | 0.2 | 7664-38-2 | N/E | NDA |
| EDTA | 0.65 | 64--02-8 | N/E | NDA |
| Yellow-Green Fluorescent Dye | 0.011 | 518-47-8 | N/E | Oral $LD_{50}$(rat) 6800 mg/kg |
| Water | Approx. 50.0 | 7732-18-5 | N/E | NDA |
| | | | | |

## SECTION 3 - PHYSICAL AND CHEMICAL CHARACTERISTICS (Fire and Explosion Data)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Boiling Point: | 113ºC | | | Specific Gravity ($H_2O$=1): | 1.33 | Vapor Pressure (mm Hg): | Not Determined |
| Percent Volatile by Volume (%): | Approx. 50.0 | Vapor Density: (Air = 1): | 1.03 | Evaporation Rate: (Butyl Acetate=1): | Approx. 0.005 | | |
| Solubility in Water: | 100% | | | Reactivity in Water: | Mild exothermic reaction | | |
| Appearance and Odor: | Fluorescent Yellow Colored Liquid, Mild Odor | | | | | | |
| Flash Point: | None to boiling | Flammable Limits in Air % by Volume: | N/A | Extinguisher Media: | N/A | Auto-Ignition Temperature: | N/A |
| Special Fire Fighting Procedures: | NONE - THIS IS AN EXTINGUISHING AGENT | | | | | | |
| Unusual Fire and Explosion Hazards: | None | | | | | | |

## SECTION 4 - PHYSICAL HAZARDS

| | | | |
|---|---|---|---|
| Stability: | Unstable ☐ Stable ☒ | Conditions to Avoid: | N/A |
| Incompatibility (Materials to Avoid): | Reactive Metals, $ClF_3$, electrically energized equipment, any material reactive with water. | | |
| Hazardous Decomposition Products: | Not established, acrid fumes. | | |
| Hazardous Polymerization: | May Occur ☐ Will Not Occur ☒ | Conditions to Avoid: | N/A |

## SECTION 5 - HEALTH HAZARDS



| | |
|---|---|
| Threshold Limit Value: | None Established |
| Routes of Entry: Eye Contact: | Irritant |
| Skin Contact: | Irritant |
| Inhalation: | Not an expected route of entry. Can be irritating to mucous membranes. |
| Ingestion: | Irritating to mucous membranes. Acute Oral $LD_{50}$ (Sprague-Dawley rats) 825.5mg/kg. |
| Signs and Symptoms: | Acute Exposure: Material irritates skin, eyes, and mucous membranes.<br>Chronic Exposure: None known. |
| Medical Conditions Generally Aggravated by Exposure: | None known. |
| Chemical Listed as Carcinogen or Potential: | National Toxicology Program: Yes ☐ No ☒ I.A.R.C Monographs: Yes ☐ No ☒ OSHA Yes ☐ No ☒ |

## SECTION 6 - EMERGENCY AND FIRST AID PROCEDURES

| | |
|---|---|
| Eye Contact: | Flush and irrigate with water for 15 minutes while holding eyelids open.<br>If irritation persists, seek medical attention. |
| Skin Contact: | Wash thoroughly with soap and water. If irritation persists, seek medical attention. |
| Inhalation: | Fresh air if symptoms occur. If irritation persists, seek medical attention. |
| Ingestion: | Dilute by drinking large quantities of water. |

## SECTION 7 - SPECIAL PROTECTION INFORMATION

| | | | |
|---|---|---|---|
| Respiratory Protection (Specify Type): | N/A | | |
| Ventilation: | Local Exhaust: N/A | Mechanical (General): | N/A |
| Protective Gloves: | Rubber gloves for spill/leak | Eye Protection: | Chemical goggles recommended during spill/leak procedures. |
| Other Protective Clothing or Equipment: | Eye wash and safety showers are good safety practice. | | |

## SECTION 8 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

| | |
|---|---|
| Precautions to be taken in Handling and Storage: | Store in original container. Keep tightly closed. Keep separate from acid. |
| Other Precautions: | See incompatibility information in Section 4. |
| Steps to be taken in Case Material is Released or Spilled: | Stop leaks. Contain spills. Remove as much as possible. Place in closed container for proper disposal<br>Wash spill area with large amounts of water to remove traces and neutralize. |
| Waste Disposal Methods: | Dispose of in compliance with local, state and federal regulations. |

## HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

**HAZARD INDEX**

| | |
|---|---|
| 4 SEVERE HAZARD | 0 HEALTH |
| 3 SERIOUS HAZARD | |
| 2 MODERATE HAZARD | 0 FLAMMABILITY |
| 1 SLIGHT HAZARD | |
| 0 MINIMAL HAZARD | 0 REACTIVITY |

N/A = Not Applicable NDA = No Data Available N/E = Not Established

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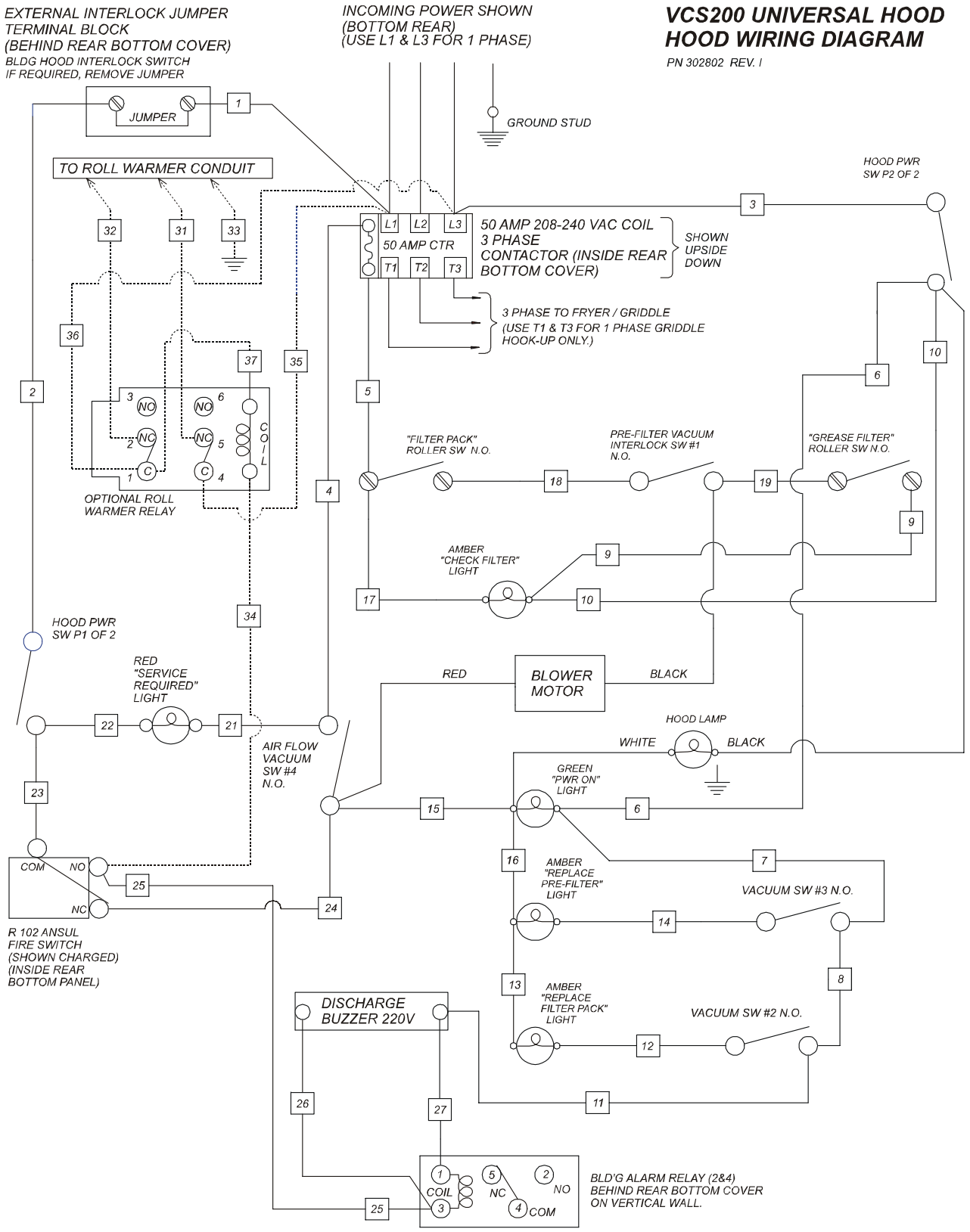
# WIRING DIAGRAM



## NOTES

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